



SDMS Doc ID 2000777

2000777

CERTIFIED MAIL

August 14, 2002  
In reply refer to 2002RC2771



Gerard Abrams  
Calif. Environmental Protection Agency  
Dept. of Toxic Substances Control  
Region 1  
Facility Permitting Branch  
8800 Cal Center Drive  
Sacramento CA 95826-3200

Subject: Santa Susana Field Laboratory Corrective Action Program Quarterly  
Progress Reports for EPA ID Numbers CAD093365435 (Rocketdyne),  
CA1800090010 (NASA) and CAD000629972 (DOE)

Dear Mr. Abrams:

The Boeing Company, Rocketdyne (Rocketdyne) has enclosed the following progress reports as required by Hazardous Waste Facility Post-Closure Permits for Rocketdyne and NASA at the Santa Susana Field Laboratory (SSFL). In addition, Rocketdyne has included a progress report for the DOE Corrective Action sites in Area IV. Rocketdyne has submitted the reports in the format as it appears in Attachment I of the Rocketdyne and NASA permits. This reporting period is from May 16, 2002 through August 15, 2002.

Should you have any comments, please do not hesitate to let me know. I can be reached at (818) 586-5695.

Sincerely,

A handwritten signature in black ink, appearing to read "Art Lenox".

Art Lenox  
Environmental Remediation

AJL:bjc  
Enclosures

(SHEA-096028)

G. Abrams (2002RC2771)

August 14, 2002

Page 2



cc: A. Elliott/NASA (with enclosures)  
D. Hambrick/Montgomery Watson (with enclosures)  
T. Chauvel/DTSC (with enclosures)  
S. Baxter/DTSC (with enclosures)  
P. Batarseh/DTSC (with enclosures)  
P. Bailey/DTSC (with enclosures)  
K. Baker/DTSC (with enclosures)  
M. Lopez/DOE/OAK (with enclosures)  
J. Beach/EPA (with enclosures)  
Committee to Bridge the Gap (with enclosures)  
R. Marshall/CSUN, Oviatt Library (with enclosures)  
D. Redfield/Simi Valley Library (with enclosures)  
J. Metzler/LA Public Library, Platt Branch (with enclosures)

**Santa Susana Field Laboratory  
RFI and CMS Projects  
Quarterly Progress Report  
EPA ID No. CA1800090010 (NASA)**

Rocketdyne Project Manager:  
Contractor Project Manager:  
Report Period:

Art Lenox  
Dixie Hambrick  
May 16 – August 15, 2002

**1.     PROGRESS MADE THIS REPORT PERIOD**

Soil sampling was not performed this period at NASA RCRA Facility Investigation (RFI) sites. To date, approximately 397 soil vapor (408 analyses) and 749 soil matrix/surface water samples (1153 analyses) have been collected from NASA locations during the RFI program (Table 2). (Table 1, summary of current sampling only contains spring/seep samples collected this period.)

Field work for the near-surface groundwater investigation continued this period, conducted by Montgomery Watson Harza (MWH). Transducers installed at representative NASA shallow piezometer locations were monitored. Results of groundwater samples collected and analyzed during April 2002 were received from the laboratory and validated. Groundwater sample analysis was conducted by Ceimic Laboratories, a California-certified laboratory located in Rhode Island. Laboratory results are pending. To date, approximately 52 groundwater samples (80 analyses) have been collected from NASA locations during the RFI program (Table 2). Preparation of an update to the August 2001 Draft Shallow Groundwater Technical Memorandum (TM) describing Fall 2000/Spring 2001 investigation findings continued this period. The draft TM will be updated to include Fall 2001/Spring 2002 results.

Spring and seep sampling was performed during June. A total of 6 spring/seep samples were collected (42 analyses) from four locations (Table 1). (The remaining proposed springs/seeps were dry.) DTSC was present during much of the spring sampling event, helped select appropriate sampling locations and methods, and collected split samples.

DTSC, Rocketdyne, and MWH met several times this period to discuss the near-surface groundwater and soil investigations, risk assessment issues, DTSC Hazardous Materials Laboratory (HML) data validation of the RFI samples, preliminary draft RFI reports and the RFI report schedule.

Validation of recent soil samples and conducting a program quality assurance (QA) review of soil sampling data are ongoing. DTSC validation of the RFI data continued.

Revision of the draft Surficial Media OU SRAM Addendum is ongoing based on additional DTSC review comments.

The draft Propellant Load Facility RFI site report was prepared and submitted to DTSC. Preparation of the draft Alfa/Bravo Fuel Farm (ABFF) RFI site report began.

## **2. SUMMARY OF FINDINGS**

Shallow groundwater levels continued to decline this period. Recent sampling results from NASA near-surface groundwater piezometers were similar to concentrations detected during 2001.

## **3/4 SUMMARY OF PROBLEMS/ACTIONS TAKEN**

Boeing is continuing to monitor the State of Arizona audit evaluation of the Columbia Analytical Services (CAS) laboratory. CAS has provided analytical support for the RFI. Further discussion with DTSC regarding the audit findings was conducted this period. DTSC continued an independent evaluation of the audit and CAS RFI data.

## **5. PROJECT ACTIVITY NEXT PERIOD**

Boeing will be involved with the following RFI activities during the next period:

- Conduct limited step-out sampling and data validation for NASA sites
- Download transducer data
- Continue preparation of the updated near-surface groundwater TM
- Collect a near-surface groundwater sample
- Inspect and collect (if wet) additional spring samples from 2 locations
- Prepare the spring and seep sampling report
- Continue preparation of the draft ABFF RFI site report
- Finalize the draft Surficial OU SRAM Addendum

## **6. PERSONNEL CHANGES**

None.

## **7. SUMMARY OF CONTACTS**

None.

## **8. TREATMENT SYSTEM EFFECTIVENESS**

No soil remediation treatment systems are in place or operational at this time.

RFI Quarterly Progress Report  
EPA No. CA1800090010 (Area II)  
May 16 – August 15, 2002

**9. DATA REPORTS SUBMITTED**

Propellant Load Facility RCRA Facility Investigation Report, Draft, Santa Susana Field Laboratory, Ventura County, California. May.

Table 1  
NASA Sampling Summary  
May 16, 2002 - August 15, 2002

UNIT	Facility	MATRIX	Total Samples	Total Analyses	VOC, 8260B	Metals, 6010B/7471A	ANIONS, 300	Perchlorate, 300M	Gross Alpha/Beta, 900.0	Gamma Spec, 901.1	Deuterium	Oxygen 18	TDS
Spring/seep sampling	Various (4 Sites)	W	6	42	5	6	6	5	6	6	4	4	6
<b>Total Water</b>			<b>6</b>	<b>42</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>6</b>
S = Soil	V = Vapor												
W = Water	GW = Near-Surface Groundwater												
Note - includes QA samples (water, soil, vapor); does not include samples on hold.													

**Table 2**  
**RFI Sampling Summary**  
**May 1986 - August 15, 2002**

RFI Soil Near-Surface Water Sampling Analysis Summary																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



**Santa Susana Field Laboratory**  
**RFI and CMS Projects**  
**Quarterly Progress Report**  
**EPA ID No. CAD000629972 (Department of Energy)**

Rocketdyne Project Manager:	Art Lenox
Contractor Project Manager:	Dixie Hambrick
Report Period:	May 16 – August 15, 2002

**1.     PROGRESS MADE THIS REPORT PERIOD**

Limited soil sampling was performed this period based on results of previous sampling efforts and DTSC's comprehensive RCRA Facility Investigation (RFI) review. Montgomery Watson Harza (MWH) collected a total of 16 soil vapor samples at 2 DOE sites during this reporting period (Table 1). Soil vapor sample analysis was conducted at an onsite mobile laboratory by Centrum Analytical Laboratories (also California-certified for soil matrix analysis). A total of 5 soil matrix samples were also from 4 DOE sites during this reporting period (Table 1). Soil matrix sample analysis was conducted by Ceimic Laboratories, a California-certified laboratory located in Rhode Island. To date, approximately 46 soil vapor (46 analyses) and 220 soil matrix/surface water samples (765 analyses) have been collected from DOE locations during the RFI program (Table 2).

Field work for the near-surface groundwater investigation continued this period. Water levels were measured monthly in June and July at the 20 new shallow piezometers installed at DOE sites during October 2001. Transducers installed at representative DOE shallow piezometer locations were also monitored. Results of groundwater samples collected and analyzed during April 2002 were received from the laboratory and validated. Groundwater sample analysis was conducted by Ceimic Laboratories, a California-certified laboratory located in Rhode Island. To date, approximately 27 groundwater samples (93 analyses) have been collected from DOE locations during the RFI program (Table 2). Preparation of an update to the August 2001 Draft Shallow Groundwater Technical Memorandum (TM) describing Fall 2000/Spring 2001 investigation findings continued this period. The draft TM will be updated to include Fall 2001/Spring 2002 results.

Spring and seep sampling was performed during June. A total of 3 spring/seep samples were collected (17 analyses) from three locations (Table 1). (The remaining proposed springs/seeps were dry.) DTSC was present during much of the spring sampling event, helped select appropriate sampling locations and methods, and collected split samples.

DTSC, Rocketdyne, and MWH met several times this period to discuss near-surface groundwater and soil investigations, risk assessment issues, DTSC Hazardous Materials Laboratory (HML) data validation of the RFI samples, preliminary draft RFI reports and the RFI report schedule.

Comments were received from DTSC regarding the draft Building 56 Landfill (SWMU 7.1) Investigation Work Plan. Response to those comments and revision of the draft work plan are in preparation.

Preparation of the draft Building 65, Metals Laboratory Clarifier (Area IV AOC) RFI site report continued. Preparation of the Building 100 Trench (SWMU 7.5) and Old Conservation Yard (SWMU 7.4) RFI site reports began.

Validation of recent soil samples and conducting a program quality assurance (QA) review of soil sampling data are ongoing. DTSC validation of the RFI data continued.

Revision of the draft Surficial Media OU SRAM Addendum is ongoing based on additional DTSC review comments.

Infiltration monitoring continued at FSDF (SWMU 7.3) this period. The draft FSDF Interim Measure report was prepared.

## **2. SUMMARY OF FINDINGS**

Shallow groundwater levels continued to decline this period. Results of recent soil matrix samples collected at DOE RFI site locations during this or the last reporting period did not contain chemical concentrations greater than RFI field action levels (FALs). Soil vapor samples collected and analyzed this period at DOE sites contained only low concentrations of VOCs (generally less than 5 ug/Lv) or were non-detect. Slightly elevated concentrations of trichloroethylene (TCE) were detected in near-surface piezometers located near and south of Building 487 (up to 12 ug/L). An elevated perchloroethylene (PCE) concentration (150 ug/L) was detected in the sample collected near-surface piezometer downgradient of the SNAP (Area IV AOC) RFI site.

## **3/4 SUMMARY OF PROBLEMS/ACTIONS TAKEN**

Boeing is continuing to monitor the State of Arizona audit evaluation of the Columbia Analytical Services (CAS) laboratory. CAS has provided analytical support for the RFI. Further discussion with DTSC regarding the audit findings was conducted this period. DTSC continued an independent evaluation of the audit and CAS RFI data.

## **5. PROJECT ACTIVITY NEXT PERIOD**

Boeing will be involved with the following RFI activities during the next period:

- Complete monthly near-surface water level monitoring in the new DOE piezometers and download transducer data
- Continue preparation of the updated near-surface groundwater TM

- Inspect and collect (if wet) additional spring samples from 2 locations
- Prepare spring and seep sampling report
- Complete revision of the Building 56 Landfill (SWMU 7.1) Investigation Work Plan to incorporate DTSC comments, prepare final work plan, and conduct field investigation
- Complete draft Metals Clarifier (AOC), Building 100 Trench (SWMU 7.5), and Old Conservation Yard (SWMU 7.4) RFI reports and submit to DTSC
- Continue to prepare two draft DOE RFI site reports
- Finalize the draft Surficial OU SRAM Addendum
- Continue FSDF infiltration monitoring
- Complete a draft FSDF (SWMU 7.3) Interim Measure Report for DTSC review

**6. PERSONNEL CHANGES**

None.

**7. SUMMARY OF CONTACTS**

None.

**8. TREATMENT SYSTEM EFFECTIVENESS**

No soil remediation treatment systems are in place or operational at this time.

**9. DATA REPORTS SUBMITTED**

None.

Table 1  
DOE Sampling Summary  
May 16, 2002 - August 15, 2002

UNIT	Facility	MATRIX	Total Samples	Total Analyses	VOC, 8260B	TPH, 8015/BM	SVOC, 8270CSIM	PCBs, 8082	Metals, 6010B/7471A	ANIONS, 300	PH, 9040/9045	Perchlorate, 300M	Gross Alpha/Beta, 900.0	Gamma Spec, 901.1	Deuterium	Oxygen 18	TDS
Area IV AOC - B009 Leachfield	B009 Leachfield	S	2	9	0	2	2	1	2	0	2	0	0	0	0	0	0
Area IV AOC - B363 Leachfield	B363 Leachfield	V	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
Area IV AOC - B373 Leachfield	B373 Leachfield	V	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Area IV AOC - B457 Haz. Storage	B457 Haz. Storage	S	3	15	3	3	0	3	3	0	3	0	0	0	0	0	0
Area IV AOC - B457 Haz. Storage	B457 Haz. Storage	V	13	13	13	0	0	0	0	0	0	0	0	0	0	0	0
Spring/seep sampling	Various (3 Sites)	W	3	17	3	0	0	0	1	2	0	3	2	2	2	2	1
Total Soil			5	24	3	5	2	4	5	0	5	0	0	0	0	0	0
Total Soil Vapor			16	16	16	0	0	0	0	0	0	0	0	0	0	0	0
Total Water			3	17	3	0	0	0	1	2	0	3	2	2	2	2	1
<b>TOTAL</b>			<b>24</b>	<b>57</b>	<b>22</b>	<b>5</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>2</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>
S = Soil	V = Vapor																
W = Water	GW = Near-Surface Groundwater																
Note - includes QA samples (water, soil, vapor); does not include samples on hold.																	

Table 2  
RFI Sampling Summary  
May 1995 - August 15, 2002

RFI Soil Matrix/Surface Water Sampling Analysis Summary																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Santa Susana Field Laboratory  
RFI and CMS Projects  
Quarterly Progress Report  
EPA ID No.CAD 093365435 (Rocketdyne)**

Rocketdyne Project Manager:	Art Lenox
Contractor Project Manager:	Dixie Hambrick
Report Period:	May 16 – August 15, 2002

**1. PROGRESS MADE THIS REPORT PERIOD**

Limited soil sampling was performed this period based on results of previous sampling efforts and DTSC's comprehensive RCRA Facility Investigation (RFI) review. Montgomery Watson Harza (MWH) collected a total of 27 soil vapor samples at 2 Rocketdyne sites during this reporting period (Table 1). Soil vapor sample analysis was conducted at an onsite mobile laboratory by Centrum Analytical Laboratories (also California-certified for soil matrix analysis). To date, approximately 1113 soil vapor (1202 analyses) and 2751 soil matrix/surface water samples (5809 analyses) have been collected from Rocketdyne locations during the RFI program (Table 2).

Field work for the near-surface groundwater investigation continued this period. Water levels were measured monthly in June and July at the three new shallow piezometers installed at Rocketdyne sites during October 2001. Transducers installed at representative Rocketdyne shallow piezometer locations were also monitored. Results of groundwater samples collected and analyzed during April 2002 were received from the laboratory and validated. Groundwater sample analysis was conducted by Ceimic Laboratories, a California-certified laboratory located in Rhode Island. To date, approximately 129 groundwater samples (225 analyses) have been collected from Rocketdyne locations during the RFI program (Table 2). Preparation of an update to the August 2001 Draft Shallow Groundwater Technical Memorandum (TM) describing Fall 2000/Spring 2001 investigation findings continued this period. The draft TM will be updated to include Fall 2001/Spring 2002 results.

Spring and seep sampling was performed during June. A total of 6 spring/seep samples were collected (46 analyses) from four locations (Table 1). (The remaining proposed springs/seeps were dry.) DTSC was present during much of the spring sampling event, helped select appropriate sampling locations and methods, and collected split samples.

DTSC, Rocketdyne, and MWH met several times this period to discuss the near-surface groundwater and soil investigations, risk assessment issues, DTSC Hazardous Materials Laboratory (HML) data validation of the RFI samples, preliminary draft RFI reports and the RFI report schedule.

Discussion continued with DTSC regarding requirements for the implementation of the Area I Landfill (SWMU 4.2) investigation.

Validation of recent soil and water samples and conducting a program quality assurance (QA) review of soil sampling data are ongoing. DTSC validation of the RFI data continued.

Revision of the draft Surficial Media OU SRAM Addendum is ongoing based on additional DTSC review comments.

## **2. SUMMARY OF FINDINGS**

Shallow groundwater levels continued to decline this period. Low concentrations of trichloroethylene (TCE) and perchloroethylene (PCE) were detected in recent soil vapor samples collected at the B-1 RFI site. Recent sampling results from Rocketdyne near-surface groundwater piezometers were similar to concentrations detected during 2001.

## **3/4 SUMMARY OF PROBLEMS/ACTIONS TAKEN**

Boeing is continuing to monitor the State of Arizona audit evaluation of the Columbia Analytical Services (CAS) laboratory. CAS has provided analytical support for the RFI. Further discussion with DTSC regarding the audit findings was conducted this period. DTSC continued an independent evaluation of the audit and CAS RFI data.

## **5. PROJECT ACTIVITY NEXT PERIOD**

Boeing will be involved with the following RFI activities during the next period:

- Conduct limited step-out sampling and data validation for Rocketdyne sites
- Complete monthly near-surface water level monitoring in the new Rocketdyne piezometers and download transducer data
- Continue preparation of the updated near-surface groundwater TM
- Collect a near-surface groundwater sample
- Inspect and collect (if wet) additional spring samples from 2 locations
- Prepare a spring and seep sampling report
- Revise the draft APTF site report
- Finalize the draft Surficial OU SRAM Addendum

## **6. PERSONNEL CHANGES**

None.

**7. SUMMARY OF CONTACTS**

None.

**8. TREATMENT SYSTEM EFFECTIVENESS**

No soil remediation treatment systems are in place or operational at this time.

**9. DATA REPORTS SUBMITTED**

None.



Table 1  
Rocketdyne Sampling Summary  
May 16, 2002 - August 15, 2002

UNIT	Facility	MATRIX	Total Samples	Total Analyses	VOC, 8260B	Metals, 6010B/7471A	ANIONS, 300	Perchlorate, 300M	Gross Alpha/Beta, 900.0	Gamma Spec, 901.1	Deuterium	Oxygen 18	TDS
SWMU 4.1	B-1 Area	V	27	27	27	0	0	0	0	0	0	0	0
SWMU 7.10	Bldg. 5, PDU	V	21	21	21	0	0	0	0	0	0	0	0
Spring/seep sampling	Various (4 Sites)	W	6	46	6	5	5	5	5	5	5	5	5
Total Soil Vapor			48	48	48	0	0	0	0	0	0	0	0
Total Water			6	46	6	5	5	5	5	5	5	5	5
TOTAL			54	94	54	5	5	5	5	5	5	5	5
S = Soil	V = Vapor												

Table 2  
RFI Sampling Summary  
May 1995 - August 15, 2002

RPI Soil Matrix/Surface Water Sampling Analysis Summary																																								
OWNER/OPERATOR	Total Samples	Total Analyses	VOA, 8260	TPH, 8015	VOA, 8021A	SVOA, 8270S/M	SVOA, 8270	Metals, 6010/7000	Mercury, 7471A	Methyl Mercury	Silver, 7781	Lead	Beryllium	Hex Cr, 7196	Fluoride, 340 2	ANIONS, 300	PH, 9040/9045	PCBs, 8080/8082	PCBs, 1668	Form, ASTM D19	Perchlorate, 300M	Tributyl Sn	Dioxin, 8280	Dioxin, 1613B	Hydrazine	Ordnance, 8330	SPLP, 1312	Asbestos	LIPIDS	TOC	Arsenic	PAH, 8315A	1-4 Dioxane	Gross Alpha/Beta, 900 0	Gamma Spec, 901 1	Deuterium	Oxygen 18	TDS		
Rocketdyne	2751	5808	174	1086	845	644	92	921	59	3	10	2	2	84	175	184	737	121	18	193	255	2	120	10	14	130	78	0	2	8	1	2	11	5	5	5	5	5		
NASA	755	1195	74	359	153	83	18	136	72	2	20	0	0	10	10	17	84	40	16	5	0	50	11	0	1	5	5	0	3	0	0	13	6	6	4	4	6			
DOE	220	785	11	138	50	96	10	141	0	0	1	0	0	2	17	9	110	42	1	0	35	0	52	0	0	4	6	32	0	0	0	0	2	2	2	2	1			
Total	3726	7788	259	1583	849	823	120	1198	131	5	31	2	2	96	202	210	911	203	27	209	295	2	222	21	14	135	89	37	2	11	1	2	24	13	13	11	11	12		
Notes																																								
Soil, water only - no vapor																																								
No Task 203 samples (LUFF)																																								
No Bell Canyon samples																																								
Includes all Ogden/MWH samples at RFI sites - June 96 thru present																																								
RFI Soil Vapor Sampling Analysis Summary																																								
OWNER/OPERATOR	Total Active SV Samples	Total Dilutions	Total Active SV Analyses	Total PSV Samp/Anal	Total SV Samples	Total SV Analyses																																		
Rocketdyne	1105	102	1194	8	1113	1202																																		
NASA	383	19	394	14	397	408																																		
DOE	48	0	48	0	46	46																																		
Total	1534	121	1634	22	1556	1656																																		
Notes																																								
Includes HGS, CAL analyses (no TEG)																																								
Includes all Ogden/MWH samples at RFI sites - June 96 thru present																																								
All analyses performed by Method 8260, modified for vapor																																								
Includes Gore analyses, no dilutions required																																								
RFI Biotic Sampling Analysis Summary																																								
OWNER/OPERATOR	Total Samples	Total Analyses	SVOA, 8270CS/M	Metals, 6010B/7471A	PCBs, 1668	Dioxin, 1613B	LIPIDS																																	
DOE	0	0	0	0	0	0	0																																	
NASA	25	87	12	24	13	13	25																																	
Rocketdyne	20	42	8	0	12	2	20																																	
Total	45	129	20	24	25	15	45																																	
Notes																																								
Includes all Ogden/MWH samples at RFI sites - June 96 thru present																																								
RFI Near-Surface Groundwater Sampling Analysis Summary																																								
OWNER/OPERATOR	Total Samples	Total Analyses	VOA, 8260	TPH, 8015	SVOA, 8270S/M	Metals, 6010/7000	Arsenic	PCBs, 6082	Perchlorate, 300M	1-4 Dioxane, 8260S/M	Dioxin, 8280	Gross Alpha/Beta, 900 0	Gamma Spec, 901 1	Tritium, 906 0	Nitrate	TDS	Ordnance, 8330	Hex Cr, 7196																						
Rocketdyne	129	225	113	17	17	16	3	6	16	17	6	6	1	1	0	0	5	1																						
NASA	52	80	49	12	4	3	0	0	0	7	2	1	0	0	1	1	0	0																						
DOE	27	93	22	10	6	8	0	1	1	0	0	15	15	15	0	0	0	0																						
Total	208	398	184	39	27	27	3	7	17	24	8	22	16	16	1	1	5	1																						
Notes																																								
Includes all Ogden/MWH samples at RFI sites - June 96 thru present																																								
Gross Alpha/Beta analyses from 2001 also included on table																																								